Neighborhood Planning for Community Revitalization

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Environmental Profile of the Lind-Bohanon Neighborhood

A CONSORTIUM PROJECT OF: Augsburg College; College of St. Catherine; Hamline University; Higher Education Consortium for Urban Affairs; Macalester College; Metropolitan State University; Minneapolis Community College; Minneapolis Neighborhood Revitalization Program; University of Minnesota (Center for Urban and Regional Affairs; Children, Youth and Family Consortium; Minnesota Extension Service); University of St. Thomas; and Minneapolis community and neighborhood representatives.

Environmental Profile of the Lind-Bohanon Neighborhood

Conducted on behalf of
Lind Bohanon Neighborhood Association

Prepared by
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Executive Summary

The environmental profile of the Lind-Bohanon Community was an examination of the various industries within the borders of the Lind-Bohanon Community. The main goal of this profile was to examine the emissions of Carbon Monoxide, Nitrogen dioxide, Particulate Matter, PM-10, Sulfur dioxide and Volatile Organic Compounds. After the amounts of emissions were determined the health and environmental impacts of these chemicals were determined. In addition, the environmental justice movement and the makeup of the community were both evaluated. The laws governing emission levels were explained and analyzed. In conclusion, the community was given suggestions on how to make their community more environmentally sound.

Acknowledgments

I would like to thank Paul Zobitz, Kris Nelson, Amy Luesebrink, Lottie Melman and Fahima Aziz for all of their assistance during the duration of my internship. I learned a lot from them all and I really appreciated their help and support.

Environmental Profile for the Lind Bohanon Neighborhood

Introduction

In a neighborhood with a variety of industries emitting a wide range of chemicals, it is imperative that the community has an understanding of how the pollutants affect their neighborhood. It is crucial that both health and environmental affects of the various pollutants are determined. The Lind-Bohanon community is taking the crucial step, which many other neighborhoods fail to do. That is they are requesting that the environmental quality of their neighborhood is determined. It is important to note that this environmental profile is just the beginning of a long journey that must be completed in order for changes to come about in the Lind-Bohanon neighborhood. This process may seem long and tedious at times, but it is imperative that a community does not loose sight of what is important, and that is its inherent right to live in a place where its inhabitants are free from environmental harm.

In the course of this environmental profile the various plants reviewed will be discussed in terms of their emission limits and the affects these emissions have on both human health and the environment. In addition, explanations of various air permits will be given. Next, the Clean Air Act and various Minnesota air quality laws will both be presented and discussed. It is essential that a community has a grasp on the environmental justice movement and how it relates to their community. In conclusion, the community will receive various suggestions on how to protect their community from further degradation.

Plants Reviewed

Aggregate Industries Inc. Yard
65 25th Ave North .
Minneapolis, MN
55411
Facility ID 05300458

Cemstone Products
26th Ave N.
Minneapolis, MN
55411
Facility ID 05300374

City of Minneapolis- Asphalt Plant
1925 E 26th St.
Minneapolis, MN
55404
Facility ID 05300167

GAF Building Materials Co.
50 Lowry Ave North
Minneapolis, MN
55411
Facility ID 05300043

General Electric International
2025 49th Ave North
Minneapolis, MN 55430
Facility ID 05300044

Holnam Inc. Minneapolis Terminal
3939 1st St. @ Dowling
Minneapolis, MN 55412
Facility ID 05300896

Owens- Corning Mpls Plant
1901 49th Ave North
Minneapolis, MN
55430
Facility ID 05300127

****It is important to note that the industries included here are only the industries that are required by law to hold air permits. Thus, other industries in the neighborhood are polluting and in turn add to the on going problem, but their levels of pollutant are unknown, because they do not have to disclose emission records to the public.

CO Emissions

Aggregate	Tons	Cemstone	Tons	Asphalt	Tons
1998	0.01	1998	0.03	1998	16.04
1997	0.05	1997	0.03	1997	n/a
1996	0.3	1996	0.04	1996	n/a
1995	n/a	1995	n/a	1995	n/a
1994	n/a	1994	n/a	1994	n/a
1993	n/a	1993	n/a	1993	n/a
1992	n/a	1992	n/a	1992	n/a
1991	n/a	1991	n/a	1991	n/a
1990	n/a	1990	n/a	1990	n/a

GAF	Tons	General	Tons	Holnam	Tons
1998	2.43	1998	0.01	1998	n/a

1997	0.72	1997	n/a	1997	n/a
1996	0.84	1996	n/a	1996	n/a
1995	0.88	1995	n/a	1995	n/a
1994	0.77	1994	n/a	1994	n/a
1993	0.76	1993	n/a	1993	n/a
1992	1.05	1992	n/a	1992	n/a
1991	1.05	1991	n/a	1991	n/a
1990	0.77	1990	n/a	1990	n/a

Owens	Tons	total	tons
1998	48.89	1998	67.51
1997	48.48	1997	49.28
1996	44.99	1996	46.17
1995	8.46	1995	9.34
1994	1.54	1994	2.31
1993	0.99	1993	1.75
1992	1.13	1992	2.18
1991	6.84	1991	7.89
1990	4.32	1990	5.09
		State	100
		National	100

NO2

Aggregate	Tons	Cemstone	tons		Asphalt	tons
1998	n/a	1998	0.15		1998	1.47
1997	n/a	1997	0.15		1997	n/a
1996	n/a	1996	0.19		1996	n/a
1995	n/a	1995	n/a		1995	n/a
1994	n/a	1994	n/a		1994	n/a
1993	n/a	1993	n/a		1993	n/a
1992	n/a	1992	n/a		1992	n/a
1991	n/a	1991	n/a		1991	n/a
1990	n/a	1990	n/a		1990	n/a

GAF	Tons	General	tons		Holnam	
1998	4.41	1998	0.04		1998	n/a
1997	3.35	1997	n/a		1997	n/a
1996	4.36	1996	n/a		1996	n/a
1995	4.61	1995	n/a		1995	n/a
1994	4.93	1994	n/a		1994	n/a
1993	4.67	1993	n/a		1993	n/a
1992	7.25	1992	n/a		1992	n/a
1991	7.25	1991	n/a		1991	n/a
1990	4.41	1990	n/a		1990	n/a

Owens	Tons	total	tons	State	100

1998	15.46	1998	21.53	National	100
1997	18.25	1997	21.75		
1996	16.42	1996	20.97		
1995	9.88	1995	14.49		
1994	6.67	1994	11.6		
1993	5.45	1993	10.12		
1992	5.79	1992	13.04		
1991	3.42	1991	10.67		
1990	5.57	1990	9.98		

Aggregate	Tons	Cemstone	PM-10 tons	Asphalt	tons
1998	28.72	1998	39.26	1998	1.82
1997	6.2	1997	29.57	1997	n/a
1996	5.55	1996	35.76	1996	n/a
1995	2.65	1995	n/a	1995	n/a
1994	0.5	1994	n/a	1994	n/a
1993	0.4	1993	n/a	1993	n/a
1992	0.44	1992	n/a	1992	n/a
1991	2.02	1991	n/a	1991	n/a
1990	0.69	1990	n/a	1990	n/a

GAF	Tons	General	tons	Holnam	tons
1998	9.98	1998	n/a	1998	0.12
1997	8.84	1997	n/a	1997	0.11
1996	3.95	1996	n/a	1996	1.04
1995	7.37	1995	n/a	1995	0.72
1994	119.4	1994	n/a	1994	n/a
1993	2.83	1993	n/a	1993	n/a
1992	82.5	1992	n/a	1992	n/a
1991	82.5	1991	n/a	1991	n/a
1990	85.25	1990	n/a	1990	n/a

Owens	Tons	total	tons
1998	120.39	1998	200.29
1997	61.25	1997	105.97
1996	63.33	1996	109.63
1995	18.24	1995	28.98

1994	27.35	1994	147.25		
1993	16.52	1993	19.75		
1992	21.62	1992	104.56		
1991	31.01	1991	115.53		
1990	0.38	1990	86.32		
		State	25		
		National	100		

Aggregate	Tons	PT Cemstone	tons	Asphalt	tons
1998	28.72	1998	39.26	1998	3.4
1997	7.2	1997	29.57	1997	n/a
1996	11.67	1996	35.76	1996	n/a
1995	7.29	1995	n/a	1995	n/a
1994	1.42	1994	n/a	1994	n/a
1993	1.05	1993	n/a	1993	n/a
1992	1.22	1992	n/a	1992	n/a
1991	1.19	1991	n/a	1991	n/a
1990	1.99	1990	n/a	1990	n/a

GAF	Tons	General	tons	Holnam	tons
1998	10	1998	0.06	1998	0.23
1997	9.12	1997	n/a	1997	0.22
1996	4.37	1996	n/a	1996	2.09
1995	7.99	1995	n/a	1995	1.45
1994	3.75	1994	n/a	1994	n/a
1993	3.12	1993	n/a	1993	n/a
1992	85.21	1992	n/a	1992	n/a
1991	85.21	1991	n/a	1991	n/a
1990	86.74	1990	n/a	1990	n/a

Owens	Tons	total	tons	National	100
1998	8.33	1998	90		
1997	11.07	1997	57.18		
1996	8.67	1996	62.56		

1995	n/a
1994	n/a
1993	n/a
1992	n/a
1991	n/a
1990	n/a

1995	n/a
1994	n/a
1993	n/a
1992	n/a
1991	n/a
1990	n/a
State	100

SO2

Aggregate	Tons
1998	n/a
1997	n/a
1996	n/a
1995	n/a
1994	n/a
1993	n/a
1992	n/a
1991	n/a
1990	n/a

Cemstone	Tons
1998	n/a
1997	n/a
1996	n/a
1995	n/a
1994	n/a
1993	n/a
1992	n/a
1991	n/a
1990	n/a

Asphalt	tons
1998	0.24
1997	n/a
1996	n/a
1995	n/a
1994	n/a
1993	n/a
1992	n/a
1991	n/a
1990	n/a

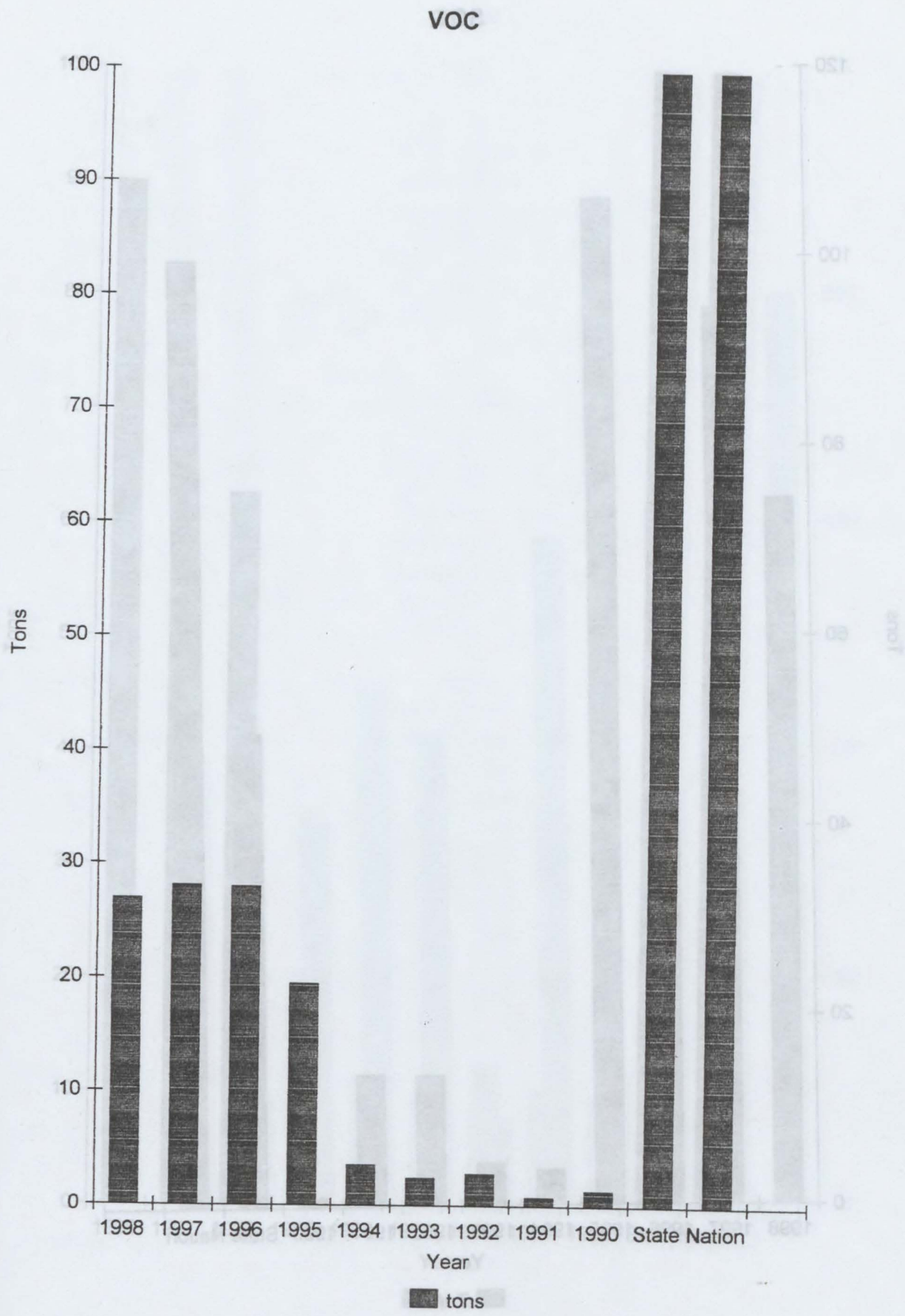
GAF	
1998	3.86
1997	2.41
1996	3.09
1995	3.69
1994	3.7
1993	4.14
1992	13.76
1991	13.76
1990	0.85

General	Tons
1998	0.07
1997	n/a
1996	n/a
1995	n/a
1994	n/a
1993	n/a
1992	n/a
1991	n/a
1990	n/a

Holnam	
1998	n/a
1997	n/a
1996	n/a
1995	n/a
1994	n/a
1993	n/a
1992	n/a
1991	n/a
1990	n/a

Owens	Tons
1998	70.38
1997	92.13
1996	70.81
1995	102.51
1994	0.09
1993	0.37
1992	0.01
1991	0.15
1990	0.14

total	Tons
1998	74.55
1997	94.54
1996	73.9
1995	106.2
1994	3.79
1993	4.51
1992	13.77
1991	13.91
1990	0.99
State	50
National	100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80
70
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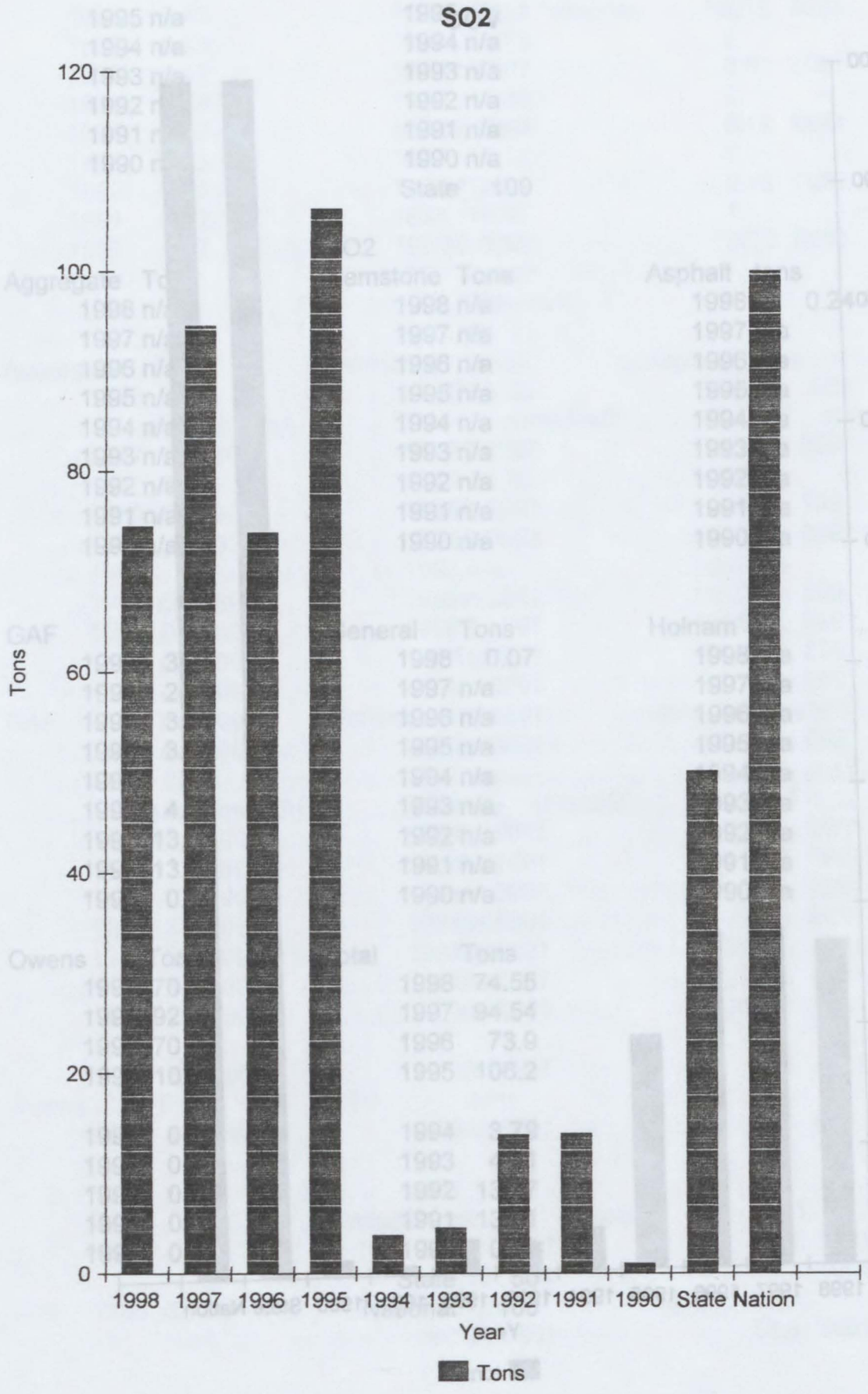
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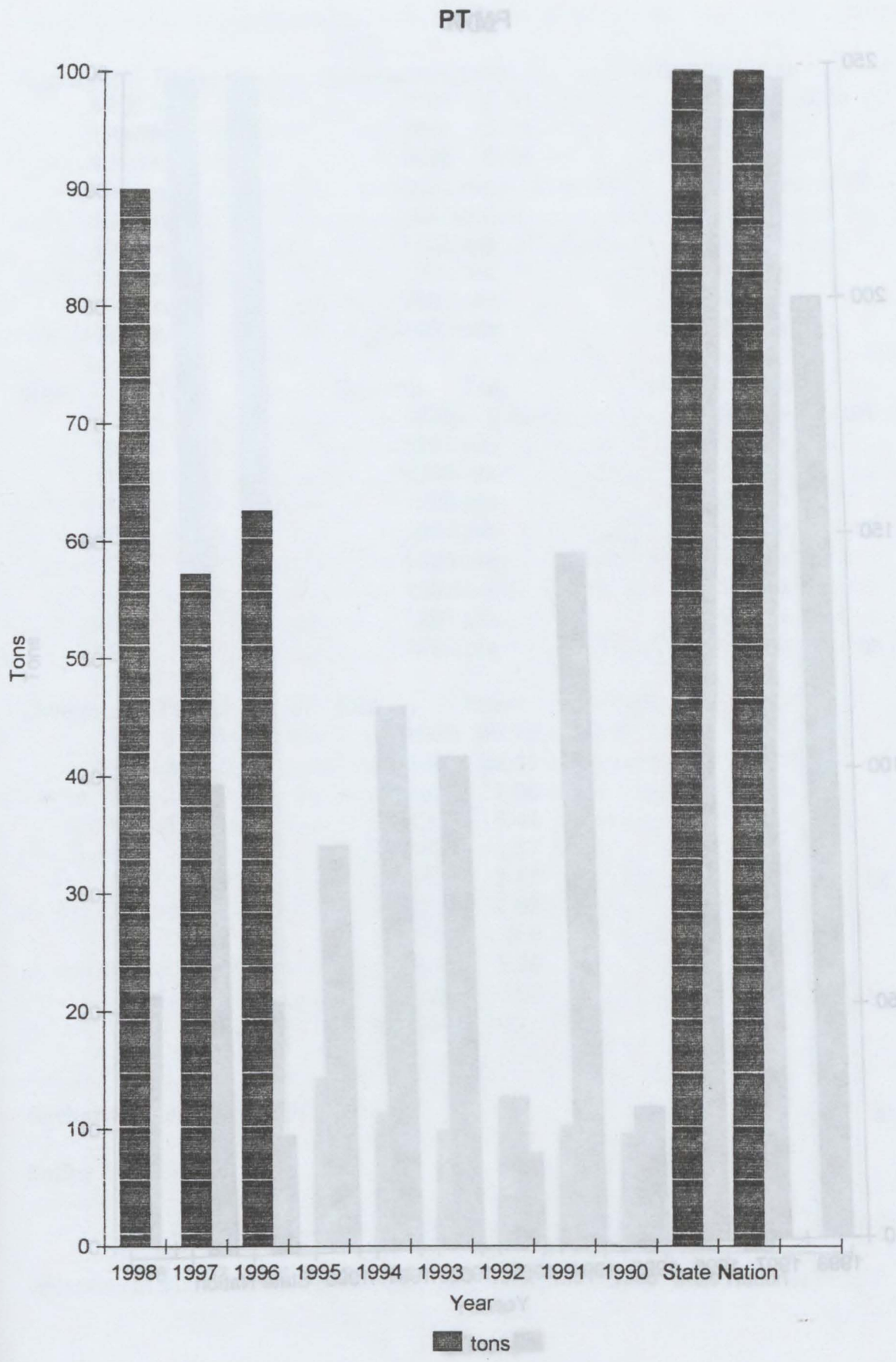
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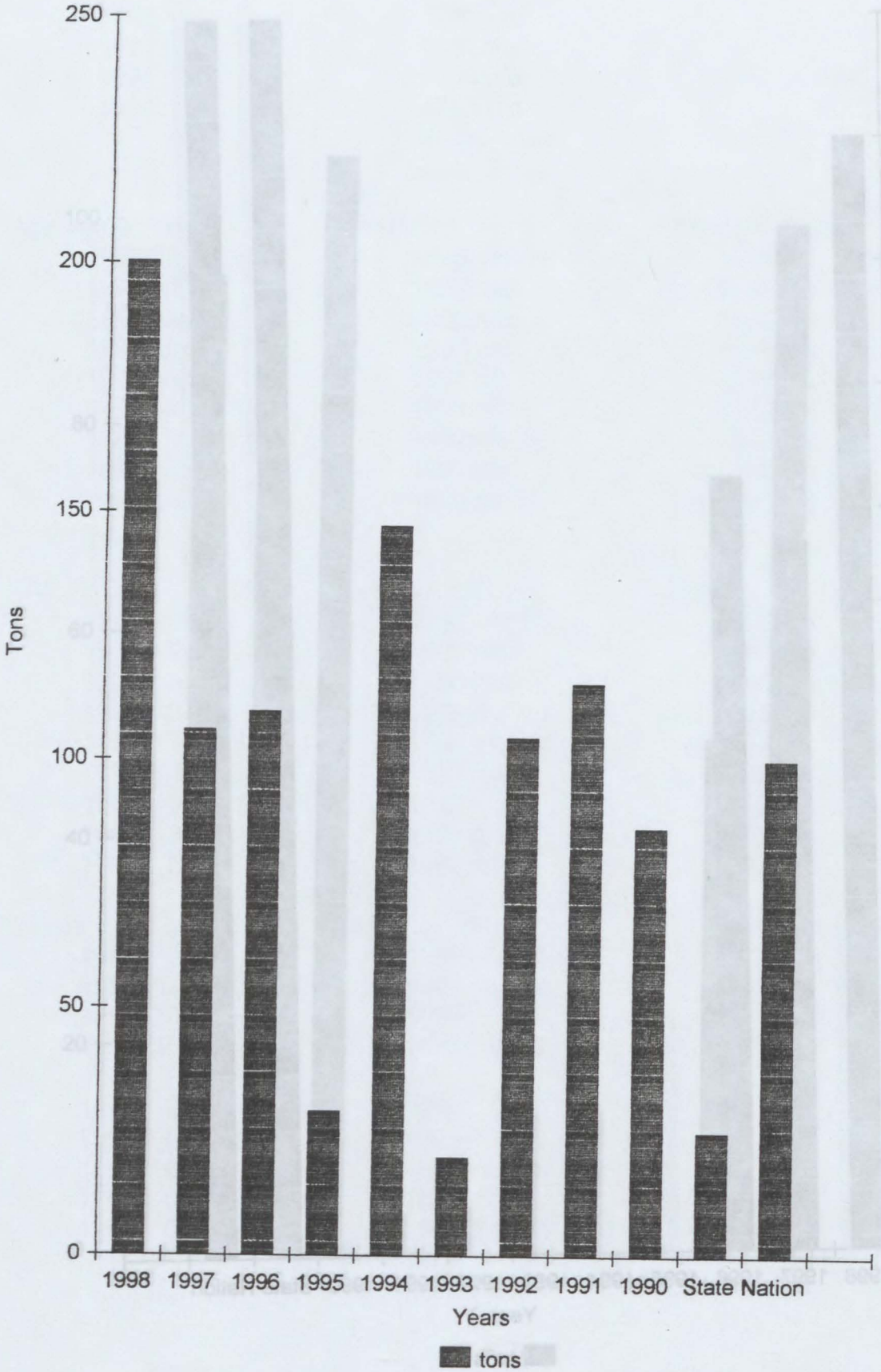
Nation
Year
tons

PM-10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Tons
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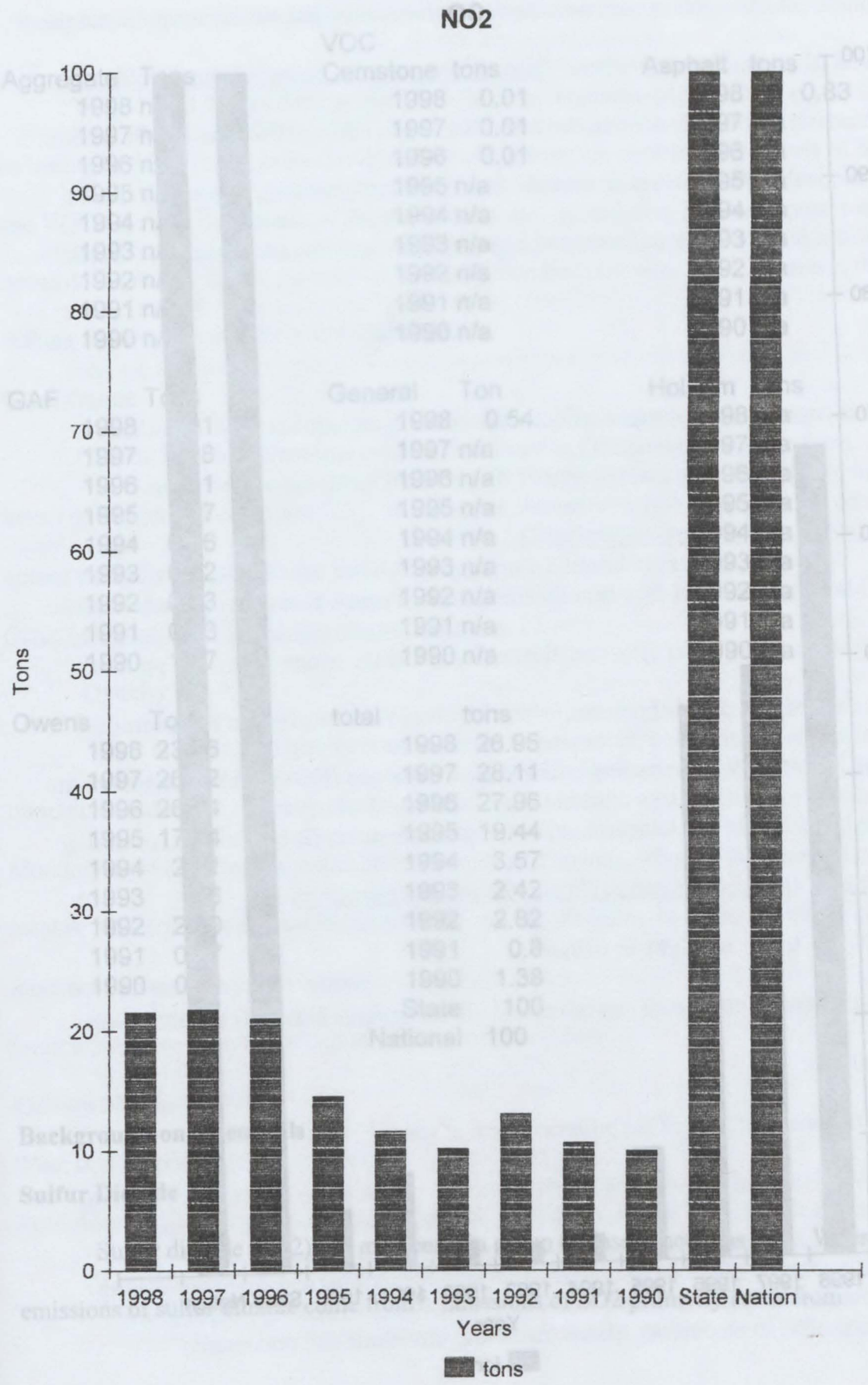
Years
tons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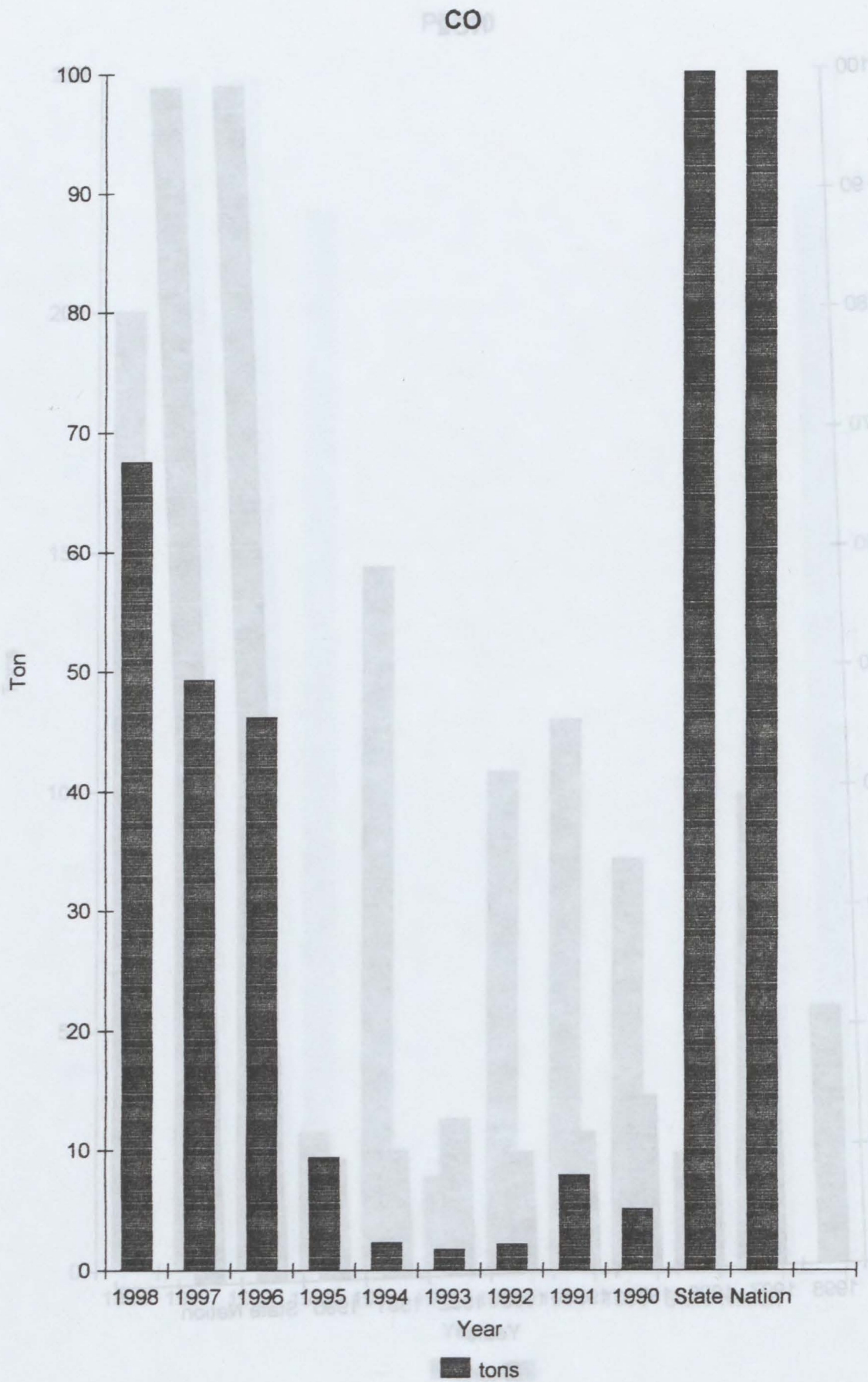
CO
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20
10
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Ton
1998
1997
1996
1995
1994
1993
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1991
1990
State Nation
Year
tons

VOC

Aggregate	Tons
1998	n/a
1997	n/a
1996	n/a
1995	n/a
1994	n/a
1993	n/a
1992	n/a
1991	n/a
1990	n/a

Cemstone	tons
1998	0.01
1997	0.01
1996	0.01
1995	n/a
1994	n/a
1993	n/a
1992	n/a
1991	n/a
1990	n/a

Asphalt	tons
1998	0.83
1997	n/a
1996	n/a
1995	n/a
1994	n/a
1993	n/a
1992	n/a
1991	n/a
1990	n/a

GAF	Tons
1998	1.91
1997	1.98
1996	1.11
1995	1.7
1994	0.96
1993	0.82
1992	0.73
1991	0.73
1990	1.27

General	Ton
1998	0.54
1997	n/a
1996	n/a
1995	n/a
1994	n/a
1993	n/a
1992	n/a
1991	n/a
1990	n/a

Holnam	tons
1998	n/a
1997	n/a
1996	n/a
1995	n/a
1994	n/a
1993	n/a
1992	n/a
1991	n/a
1990	n/a

Owens	Tons
1998	23.66
1997	26.12
1996	26.84
1995	17.74
1994	2.61
1993	1.6
1992	2.09
1991	0.07
1990	0.11

total	tons
1998	26.95
1997	28.11
1996	27.96
1995	19.44
1994	3.57
1993	2.42
1992	2.82
1991	0.8
1990	1.38
State	100
National	100

Background on Chemicals

Sulfur Dioxide

Sulfur dioxide (SO2) is a member of a group of gases known as Sox. Where does emissions of sulfur dioxide come from? Emissions of SO2 primarily come from

"stationary sources such as coal and oil combustion steel mills, refineries, pulp and paper mills and from nonferrous smelters" (http://www.epa.gov/region5/air/naaqsso2htm 1). Unfortunately, sulfur dioxide is a chemical that leaves lasting effects on human health. Thus, the health effects of sulfur dioxide are: "impaired breathing, respiratory illness, alternations in pulmonary defenses and aggravation of existing cardiovascular disease" (1).

Ozone

"Ozone is formed when nitrogen oxides and certain hydrocarbons combine in the presence of sunlight. The main source of the pollutant ozone comes from cars (http://statsbox.pca.state.mn.us/pca/aqi 2).

Many people when they hear this definition of ozone become confused. That is because there are two types of ozone: the pollutant and the ozone layer. The pollutant ozone is formed in a detailed process, which involves **volatile organic compounds**, otherwise known as VOCs reacting with oxides of nitrogen (NOx). "These reactions are stimulated by sunlight and temperature, so the peak ozone levels typically occur during the [summer]" (http://www.epa.gov/region5/air/naaqs/ozone.htm 1)

VOC + Nox + heat+ sunlight $\Rightarrow$ ozone

An important fact is that ozone can be carried via air currents hundreds of miles away from its source.

What are the health effects of the pollutant form of ozone?

> "When inhaled, even at low levels ozone can: cause acute respiratory problems such as shortness of breath, chest pain, wheezing, and coughing: aggravate asthma; cause significant temporary decreases in lung capacity; cause inflammation of lung tissue; lead to hospital admissions and emergency room visits, and impair the body's immune system defense, making people more susceptible to respiratory illness, including bronchitis and pneumonia"

(hrrp://www.epa.gov/region5/air/naaqs/ozone.html 1).

Why should the residents of the Lind-Bohanon community care about ozone and its lasting health affects? Industries like Owens-Corning are emitting high levels of NO2 and VOCS the two ingredients of the pollutant ozone. In addition, like mentioned before ozone does not stay in one place but it can travel hundreds of miles from its source, thus making ozone a concern for every community.

Good Ozone

"Ozone is a photochemical oxidant that forms in the atmosphere when three atoms of oxygen are combined [o3]. In the upper atmosphere, [the stratosphere], ozone occurs naturally and shields the Earth from the sun's harmful ultraviolet radiation" (http://www.epa.gov/region5/air/naaps/ozone.htm 1).

Opacity

What is opacity? Opacity is an indicator to how much pollution is being released through smokestacks. Opacity can be assessed both visually, as well as by air monitors. Monitors must meet federal regulation standards and anyone, whether they are a state, local or industrial worker can obtain training and certification. In addition certification must be renewed every six months.

Source: http://www.epa.gov/region5/air/opacity/part3.htm

Carbon Monoxide (CO)

What is carbon monoxide?

According to the Minnesota Pollution Control Agency

> "Carbon Monoxide (CO) is a highly toxic gas which in small amounts can impair alertness and cause fatigue and headaches. Motor vehicles contribute about 60

percent of the carbon monoxide in our air. CO levels in the Twin Cities Metropolitan area have declined over the years due to improved vehicle technology and tighter regulation" (http://www.pca.state.mn.us/about/pubs/proreport/98/air.html 2).

Carbon Dioxide (C02)

CO2 is the gas currently in the news as the main cause of global warming. CO2 comes from "fossil fuel combustion, generation of electricity and transportation. Estimated CO2 emissions in Minnesota have risen since the beginning of the decade primarily due to increased electricity generation and transportation" (http://www.pca.state.mn.us/about/pubs/proreport98/air.html 4-5).

Health Affects of CO2

Visual perception
Manual dexterity
Learning ability
Performance levels
***Dangerous to those suffering from cardiovascular disease

source: http://www.epa.gov/region5/air/naaqs/co.htm

More information on Carbon Dioxide:
http://encarta.msn.com/index/conciseindex/58/058EE000.htm?z=1&pg=2&br=1

Nitrogen Dioxide

NOx or nitrogen oxides which nitrogen dioxide is part of is an increasing concern. Nitrogen Oxides are one of the ingredients in the formation of ground level ozone, and reports also prove that nitrogen oxides are responsible for respiratory complications. Unfortunately, while the other emissions of chemicals of concern are decreasing, NOX emissions have increased around ten percent since the formation of the Clean Air Act in 1970.

The problem with nitrogen oxides is that they do not stay stationary, meaning that the areas with low emissions of nitrogen oxides still have the potential to have high rates of nitrogen oxides in their air. It is important to discuss the effects that nitrogen oxides have on the environment and human health. Nitrogen oxides have proven to play a role in the following categories: acid rain, ground-level ozone, respiratory disorders, global warming, visibility impairment, toxic chemicals and water quality deterioration.

> "Acid rain- NOX and sulfur dioxide react with other substances in the air to form acids which fall to earth as rain, fog, snow, or dry particles. Some may be carried by the wind for hundred of miles. Acid rain damages forests; causes deterioration of cars, buildings, and historical monuments; and causes lakes and streams to become acidic and unsuitable for many fish" (NOx 3).

More information on Acid Rain Available at http://www.epa.gov/airmarkets/acidrain/

> "Ground level Ozone (Smog)- is formed when NOx and volatile organic compounds (VOCS) react in the presence of heat and sunlight. Children, the elderly, people with lung diseases such as asthma, and people who work or exercise outside are susceptible to adverse effects such as damage to lung tissue and reduction in lung function" (NOX 3).

> "Particles- NOX reacts with ammonia, moisture, and other compounds to form nitric acid vapor and related particles. Human health concerns include effects on breathing and the respiratory system, damage to lung tissue, and premature death. Small particles penetrate deeply into sensitive parts of the lungs and can cause or worsen respiratory disease, such as emphysema and bronchitis, and aggravate existing heart disease" (NOX 3).

> "Global Warming- One member of the NOX family, nitrous oxide, is a greenhouse gas. It accumulates in the atmosphere with other greenhouse gases causing a gradual rise in the earth's temperature. This will lead to increased risks to human health, a rise in the sea level, and other adverse changes to plant and animal habitat" (NOX 3).

> "Visibility Impairment- Nitrate particles and nitrogen dioxide can block the transmission of light, reducing visibility in urban areas and on a regional scale in our national parks" (NOX 3).

> "Toxic Chemicals- In the air, Nox reacts readily with common organic chemicals and even ozone, to form a wide variety of toxic products, some of which may cause biological mutations" (NoX 3).

"Water Quality Deterioration- Increased nitrogen loading in water bodies, particularly, coastal estuaries, upsets the chemical balance of nutrients used by aquatic plants and animals. Additional nitrogen accelerates "eutrophication," which leads to oxygen depletion and reduces fish and shellfish populations (NOX 3).

Particulates

"Particulates are very small liquid particles in the air. They can aggravate respiratory diseases, reduce sunlight and damage plants. Particulates can be found in dust, smoke, fumes, mist, spray and fog. The major sources are iron and steel operations, electric power generation and other coal burning operations" (http://statsbox.pca.state.mn.us/pca/aqi/ 2).

Permits

Construction Permits-

"[are] required only for newly built facilities or changes to existing facilities. Therefore, a construction permit does not cover all air pollution requirements for an entire facility (unless the entire facility is new). In addition, many air pollution sources have more than one construction permit (one permit for each new modification they have made to their facility over the years). Construction permits do not have an expiration date. The conditions of a construction permit will remain effective until the conditions are modified or removed in another permit" (http://www.epa.gov/ARD-R5/permits/intro.htm 1).

Operating Permits-

"are required for all major air pollution sources (both new and existing facilities). These permits address all Clean Air Act requirements triggered by a source and are more comprehensive than construction permits. Air pollution sources typically have an expiration date, and must be renewed periodically (typically every 5 years). Also operating permits are revised when a source becomes subject to new air pollutant requirements or when a source makes changes to its facility which require the permit to be updated" (http://www.epa.gov/ARD-R%/pes/intro.com 1).

State Permits- are needed when an industries levels of emissions are below federal regulations, but at the same time above the standards set by the state.

Clean Air Act Information

The Clean Air Act was the means that the United States Government developed to put in place regulations for ground level ozone, particulate matter, carbon monoxide, lead,

sulfur dioxide, and nitrogen dioxide. Primary regulations are those that protect public health from these chemicals, whereas secondary standards are in place to protect the environment, buildings, crops ect.

> "Under the Clean Air Act, Congress directs EPA to review these standards for each of the six pollutants every five years. The purpose of these reviews is to determine whether the scientific research available since the last review of a standard indicates a need to revise a standard. The ultimate purpose is to ensure that we are continuing to provide adequate protection of public health and the environment" (Browner 215).

Carol Browner asserts that "research indicates that the present acceptable levels for these pollutants may be inadequate and that the new regulations are both necessary and sufficient to protect public health" (Browner 212). Considering the fact the Browner at the time of the statement was the head of the Environmental Protection Agency commented at the fact that new regulations for emission limits must be set in order to ensure public safety. When speaking with representatives from the Minnesota Pollution Agency I asked how often permitted levels for chemicals like carbon monoxide, nitrogen oxide, sulfur dioxide, particulate matter, small particulates and volatile organic compounds and lead were re-evaluated and changed. I was told that around every ten years the allowable levels were re-evaluated and changed. This information conflicts with Browners statement, which leads the researcher to believe that there is no cohesion between state and national authorities on this subject.

Minnesota State Air Pollution Rules

7009.0010 DEFINITIONS.

Subpart 1. Scope. For the purpose of parts 7009.0010 to 7009.0080, the following terms have the meanings given them.

Subp. 2. Primary ambient air quality standards; primary standards. "Primary ambient air quality standards" or "primary standards" mean levels established to protect the public health

from adverse effects. The adverse effects that the standards should protect against include acute or chronic subjective symptoms and physiological changes that are likely to interfere with normal activity in healthy or sensitive individuals or to interfere unreasonably with the enjoyment of life or property.

Subp. 3. Secondary ambient air quality standards; secondary standards. "Secondary ambient air quality standards" or "secondary standards" mean levels established to protect the public welfare from any known or anticipated adverse effects, such as injury to agricultural crops and livestock, damage to or deterioration of property, annoyance and nuisance of persons, or hazards to air and ground transportation.

STAT AUTH: MS s 116.07 subds 2,4

HIST: 18 SR 614
Current as of 04/18/00

Source: (http://www.revisor.leg.state.mn.us/arule/7009/0010.html 1)

In evaluating the above regulations set by the State of Minnesota, the researcher has come up with clearer definitions of the standards set by the State of Minnesota. Firstly, the government has the right to create air quality standards which industry must follow. In cases where emissions are above threshold levels industries are required to obtain a permit. Thus, if an industry obtains a permit or follows air quality standards in place, they will not face legal or monetary punishment.

Second, no industry or person is allowed to emit any pollutant in such a manner that is above the allowed amounts set by the ambient air quality standards. The regulation states that the emissions should not exceed the ambient air quality standards beyond the person's property line.

The problem with this regulation is that as discussed before air pollution does not stay at the source, thus this regulation is hard to enforce. Because pollution travels hundreds of miles away from the source amounts, which are hazardous to human health are hard to pin point to a source. Thus one must question how this policy will be regulated.

Air Pollution Facts

Did you know?

"Wind often blows smog- forming pollutants away from their sources. The reaction that creates smog occurs while the pollutants are being blown through the air by the wind. Smog is often more serious miles away from where the pollutants were created" (Blair 62). Thus, it is imperative when looking at pollutant levels for ones community to look outside of the community to other sources of pollution. In addition, it is important to determine the effects that industries in your community have on other communities because then crucial alliances between communities can be formed, thus making the process for change that much easier.

"In 1998 113 million Americans lived in areas that failed to meet pollution standards" (Blair 62). Many people live in denial of the vast environmental problems facing our world today, but it is imperative to realize that millions of people or more today live in conditions that fail to meet the standards set which ensure safety. "The American Lung Association estimates the annual health costs of exposure to the most serious air pollutants at 40 to 50 billion dollars" (Blair 63). How much money could our government save if current environmental regulations were strengthen to make sure that no one would be exposed to pollutants which could cause serious health problems?

"The EPA estimates that emissions of toxic materials into the air cause some 2,000 cancer deaths a year" (Blair 63). What is the EPA doing to make the number of cancer deaths per year as a result of emissions down to zero? "The EPA and the Harvard School of Public Health suggest that as many as 50,000 to 60,000 deaths a year are

caused by particle (soot) pollution. Scientists report that some types of particles are fatal even when under the legal limit" (Blair 65). If legal limits are shown not to be effective then why aren't our elected officials and the EPA passing new laws, which will enforce lower limits?

"78 percent of carbon monoxide emissions come from transportation" (Blair 72). It is important for the United States government to begin to look at and promote the usage of alternative fuels in order to protect our environment from further degradation. In addition, it is essential that the United States takes the lead from other industrialized nations, and begins to expand and promote public transportation systems in both rural and urban areas.

The Environmental Truth of Hennepin County

To think that Hennepin County is a clean and an environmentally safe place to live is an incorrect assumption. Just looking at the air quality in the county, it is evident that something needs to be done.

> "In 1996, [Hennepin] County ranked among the dirtiest/worst 10 percent of all counties in the United States in terms of an average individual's cancer added cancer risk from hazardous air pollutants. 1,069,466 people in Hennepin County face a cancer risk more than 100 times the goal set by the Clean Air Act. 66% of the air cancer risk is from area sources. 98% of the air cancer risk is from point sources"(http://www.scorecard.org/community...&set_community_fipscod_cooki e_p=t 1).

Although, the focus of this profile is to look at area sources it is important to note that 66 percent of the risk of cancer is a result of mobile sources. Thus, it is essential to realize that in order for the risk of cancer to be decreased it is important to strive for a decrease in automobile emissions.

Please go to http://www.scorecard.org/community/ej-summary.tcl?fips_county_code=27053&lang=eng#compare- for a complete environmental justice profile for Hennepin County

Environmental Justice Movement

What is the environmental justice movement and why should people be concerned with this movement? The environmental justice movement is one, which has the goal of promoting environmental security for everyone regardless of race, color or creed. The origins of the movement can be traced back to the Civil Rights Movement, but one should note that no one event sparked the environmental justice movement.

What are some tools for success when dealing with environmental injustice? First it is imperative that a community comes together in an attempt to rid their neighborhoods of environmental degradation. It is essential that the community educates itself on the facts surrounding the issues at heart. In addition, it is important that outside organizations are consulted. When dealing with environmental injustices many people see only the obstacles, instead of breaking down the issues into many smaller issues and then beginning to solve one issue at a time.

In the case of the Lind-Bohanon community one can look at Owens-Corning as a big obstacle. In 1996 Owens Corning according to the Environmental Defense Scorecard, released 1600 tons of PM-10, whereas the recorded number by the Minnesota Pollution Control Agency was only 63.23 tons. First one must asses where the variation in results comes from. Facilities that have air permits are the only ones that the Minnesota Pollution Control Agency has the right to keep track of emission levels, therefore it would be helpful to examine the permit of Owens Corning in detail, with the

help of a staff member of the Minnesota Pollution Control agency, and at the same time it is crucial to get into contact with a representative from the Environmental Defense Organization. Again it is important that before one challenges an industry on their emission levels, it is essential to have a solid understanding of the background information.

The Environmental Protection Agency's Environmental Justice Strategy

What is the EPA's stance on environmental justice?

In 1992 an Environmental Justice Act was introduced to the Congress Floor, unfortunately the Act did not pass, but the author of the Act Representative John Lewis of Georgia asserted, '"the quest for the environmental justice has helped to renew the civil rights movement, through its call for environmental protection as a right of all, not a privilege for a few"' (Cole and Foster 21). But at one will see two year later in 1994 both President Clinton and the EPA took a stand against environmental injustice by committing themselves to ensuring that **everyone** will be ensured the right to live in an environmentally safe community.

> "[The] EPA was established in 1970 in response to growing concerns about the problems and the difficulties in protecting public health and improving environmental conditions in our country. These concerns included unhealthy air, polluted rivers unsafe drinking water, and waste disposal.
> EPA, and the Clinton Administration, believe that all Americans are important to the future of our nation and deserve to be protected from pollution regardless of race, color, national origin, or economic circumstance"
> (http://www.epa.gov/docs/oejpubs/strategy/strategy.txt.html 1).

The Environmental Protection Agency in its Environmental Justice Strategy and President Clinton's Executive Order 12898 on Environmental Justice outline in detail

more specifically the federal government's position and goals on the subject of environmental justice. More information can be found at:

http://www.epa.gov/docs/oejpubs/strategy/strategy.txt.html
http://www.epa.gov/docs/oejpubs/prezmemo.txt.html

Internet Sites relating to Environmental Justice

The National Environmental Justice Advisory Council:
http://es.epa.gov/oeca/main/ej/nejac/
EPA Environmental Strategy site: http://www.epa.gov/docs/oejpubs/strategy/
Harvard sponsored working group on Environmental Justice: http://ecojustice.net/
EPA site on Environmental Justice includes President Clinton's executive order 12898:
http://es.epa.gov/program/iniative/justice/justice.html
Greenaction: http://www.greenaction.org/index.shtml
Environmental Justice Resource Center at Clark Atlanta: http://www.ejrc.cau.edu/
Environmental Justice News: http://www.umc-gbcs.org/gbcs006.htm
Norman Foundation: http://www.normanfdn.org/
Sierra Club: http://www.sierraclub.org/human-rights/
Center for Community Action and Environmental Justice: http://www.ccaej.org/
New York City Environmental Justice Alliance: http://www.nyceja.org/
U.S. Environmental Justice: http://www.nyu.edu/pages/elc/ej/
What is Environmental Justice: http://www.ejnet.org/ej/
Environmental Research Foundation: http://www.rachel.org/home_eng.htm

Census Information

It is important to look at the make up of ones community in terms of social, economic and racial components. In many cases minority communities have been the target of environmental injustice. It is important when discussing ones communities environmental situation to look at other communities and to compare and contrast their environmental situation, with ones owns. It is essential that a community utilizes the help of organizations promoting environmental justice. Industry more often than none targets those communities in which they know will not fight back and give in to their demands. In order to prevent this from happening a community has to look at every angle of the situation.

Take a look at the 1990 complete census of the Lind-Bohanon Community at:

http://freenet.msp.mn.us/nhoods/censusdata/mpls/LINDBOHN.html

2000 Race and Ethnicity by Neighborhood

	RACE						TOTAL	ETHNICITY
NEIGHBORHOOD	White alone	Black or African American alone	American Indian and Alaska Native alone	Asian, Native Hawaiian and Other Pacific Islander alone	Some other race alone	Population of two or more races		Hispanic or Latino
Armatage	4348	156	21	121	56	57	4759	104
Audobon Park	4414	245	63	159	176	199	5256	380
Bancroft	2347	564	52	175	237	231	3606	366
Beltrami	831	150	59	125	49	63	1277	126
Bottineau	940	69	57	68	65	55	1254	151
Bryant	711	1497	32	141	259	149	2789	423
Bryn Mawr	2474	70	4	64	16	35	2663	44
Camden Ind. Area	37	5	1	3	0	1	47	1
Carag	5160	294	56	184	75	138	5907	168
Cedar Isles Dean	2556	53	3	59	4	23	2698	31
Cedar Riverside West Bank	3174	2428	67	1190	286	400	7545	426
Central	2096	3306	199	746	1152	651	8150	1899
Cleveland	1798	1046	48	347	49	152	3440	109
Columbia	1477	126	47	54	55	75	1834	93
Como	4550	315	74	545	56	151	5691	168
Cooper	3041	129	58	77	59	84	3448	127
Corcoran	2235	672	195	191	639	296	4228	897
Diamond Lake	4595	354	24	132	41	105	5251	114
Downtown East	81	32	1	3	8	3	128	12
Downtown West	3072	1047	80	221	38	123	4581	139
East Harriet	3687	148	12	53	12	87	3999	55
East Isles	3112	55	10	74	38	51	3340	69
Ecco	2307	59	5	105	19	50	2545	62
Elliot Park	3361	2037	182	215	213	468	6476	500
Ericsson	2706	210	40	72	43	78	3149	180
Field	1685	586	16	92	28	119	2526	81
Folwell	2428	2519	112	777	121	374	6331	224

Fulton	5283	56	18	95	27	87	5566	91
Hale	2911	123	11	77	26	48	3196	49
Harrison	1016	1605	58	1117	98	258	4152	213
Hawthorne	1271	3217	148	1069	216	412	6333	339
Hiawatha	4607	273	105	98	80	141	5304	170
Holland	3204	383	164	173	218	239	4381	418
Howe	5374	622	205	170	238	269	6878	436
Humboldt Ind. Area	0	0	0	0	0	0	0	0
Jordon	2152	4526	167	1584	177	543	9149	386
Keewaydin	2922	83	22	42	46	63	3178	82
Kenny	3275	58	7	88	8	57	3493	49
Kenwood	1416	21	6	40	1	16	1500	26
King Field	6134	753	102	168	346	313	7816	603
Lind Bohanon	2704	773	108	518	103	195	4401	231
Linden Hills	6906	95	33	147	49	140	7370	121
Logan Park	1633	202	80	66	121	120	2222	197
Longfellow	3545	528	200	168	294	237	4972	483
Loring Park	6076	727	61	284	157	196	7501	380
Lowry Hill	3729	93	4	79	23	71	3999	71
Lowry Hill East	5024	403	65	162	92	166	5912	217
Lyndale	4274	1513	105	342	1041	415	7690	1646
Lynnhurst	5299	69	9	140	15	81	5613	68
Marcy Holmes	6844	439	76	1105	229	316	9009	454
Marshall Terrace	1043	87	41	62	53	56	1342	110
McKinley	1111	1598	104	581	72	192	3658	126
Mid City Ind. Area	13	2	0	0	0	0	15	0
Minnehaha	3557	226	84	61	39	91	4058	124
Morris Park	2442	177	67	129	43	126	2984	91
Near North	1041	4040	74	1002	417	347	6921	625
Nicollet Island East Bank	715	39	5	53	4	12	828	16
North Loop	914	377	77	41	39	67	1515	96
Northeast Park	649	93	17	31	65	27	882	92
Northrup	3510	362	67	129	112	155	4335	206
Page	1537	72	6	23	9	35	1682	26
Phillips	6258	5825	2352	1216	2361	1793	19805	4385
Powderhorn Park	4467	1987	477	454	1034	538	8957	1971
Prospect Park East River Road	4839	481	70	639	53	244	6326	155
Regina	934	1149	33	147	91	135	2489	175
Seward	4673	1441	153	305	116	486	7174	213
Sheridan	2109	147	83	89	169	106	2703	303

Shingle Creek	1792	586	51	550	61	130	3170	134
St. Anthony East	1645	149	67	73	72	99	2105	161
St. Anthony West	2196	131	32	76	145	86	2666	245
Standish	5031	586	262	195	258	300	6632	466
Stevens Square Loring Hgts.	2611	687	73	116	213	248	3948	456
Sumner Glenwood	13	59	1	62	8	1	144	9
Tangletown	3859	157	17	69	50	111	4263	82
U of MN	3540	130	10	216	32	98	4026	98
Victory	3597	766	42	279	55	236	4975	110
Waite Park	4634	160	35	209	52	115	5205	116
Webber Camden	2769	1677	97	691	145	297	5676	264
Wenonah	3205	585	96	145	200	191	4422	430
West Calhoun	1690	55	2	79	12	27	1865	40
Whittier	8161	3044	328	841	1990	883	15247	3299
Willard Hay	1497	5931	113	1133	116	487	9277	271
Windom	3616	845	52	130	137	204	4984	299
Windom Park	4696	433	118	193	176	170	5786	302
MINNEAPOLIS	249186	68818	8378	23744	15798	16694	382618	29175

Note: The 2000 Census data has not yet been reviewed for accuracy or completeness by the City of Minneapolis

Source: http://www.ci.minneapolis.mn.us/citywork/planning/Census2000/2000-Race-and-Ethnicity-by-Neighborhood.asp (1).

Superfund Information

In February of 1997 the property of 6800 Shingle Creek Parkway was declared a Superfund Site. A Superfund Site is an area, which is a threat to the general public and requires the EPA to come in and clean up the site. This specific site was used prior for metal plating, and it was discovered that the release of nickel from the plating solution of chromium and nickel was contaminating the soil. In April of 1998 a letter was issued to the site stating that no further action would be taken on the site. Thus, giving the general public the idea that the site was cleaned up and no longer a threat. Currently, the site

EPA Information Site on Superfund sites: http://www.epa.gov/superfund/sites/index.htm

Superfund Basic Research Fund: http://benson.niehs.nih.gov/sbrp/
Superfund Health and Safety site: http://www.epa.gov/superfund/health/index.htm
Louisiana Superfund site: http://www.cqs.com/super_la.htm
Cleaning up Superfund sites: http://www.epa.gov/superfund/sites/cleanup/index.htm

Other Information

The 'grandfather clause' was added in the Clean Air Act of 1970, which gave old facilities the right to continue working without having to make adjustments. Thus, unless the EPA steps in or remodeling takes new regulations set by the EPA do not have to be met.

Grandfather clause- http://filebox.vt.edu/users/hdonegan/gcpaper.html

http://www.hikersforcleanair.org/~daniels/papers/vanished.html

Currently, when industry does not want to invest in high tech technology like scrubbers or air monitors, they tend to use the cheaper alternative of emission trading. If an industry is emitting over their limits of a specific chemical they can buy some extra emission limits from other industry that is not using up its limits. This system does not force industries to look inward and make their practices more environmentally sound, in reality it legalizes the problem. Thus, a solution to the problem would be outlawing emission trading and force businesses to invest in scrubbers and or air monitors in their facilities and in the neighborhoods where their facilities are in.

Conclusions/Suggestions

To rid ones community of environmental injustice, it is important for a community to come together as a collective with confidence, information and persistence. A community needs to be confident in the fact that an environmental injustice is occurring within its borders. They must use all the resources available to back

themselves up and they must never give up. Environmental change is something that is not going to happen over night, but it is something that must happen. The laws set by the government must not be seen as absolute and it is imperative to challenge and change the status quo. Our elected officials have been elected by us thus it is important that we the people, convey to our officials what we want to done. We have the leverage to make bring about change, it is just a matter of whether or not we want to seize the moment and make change a reality.

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